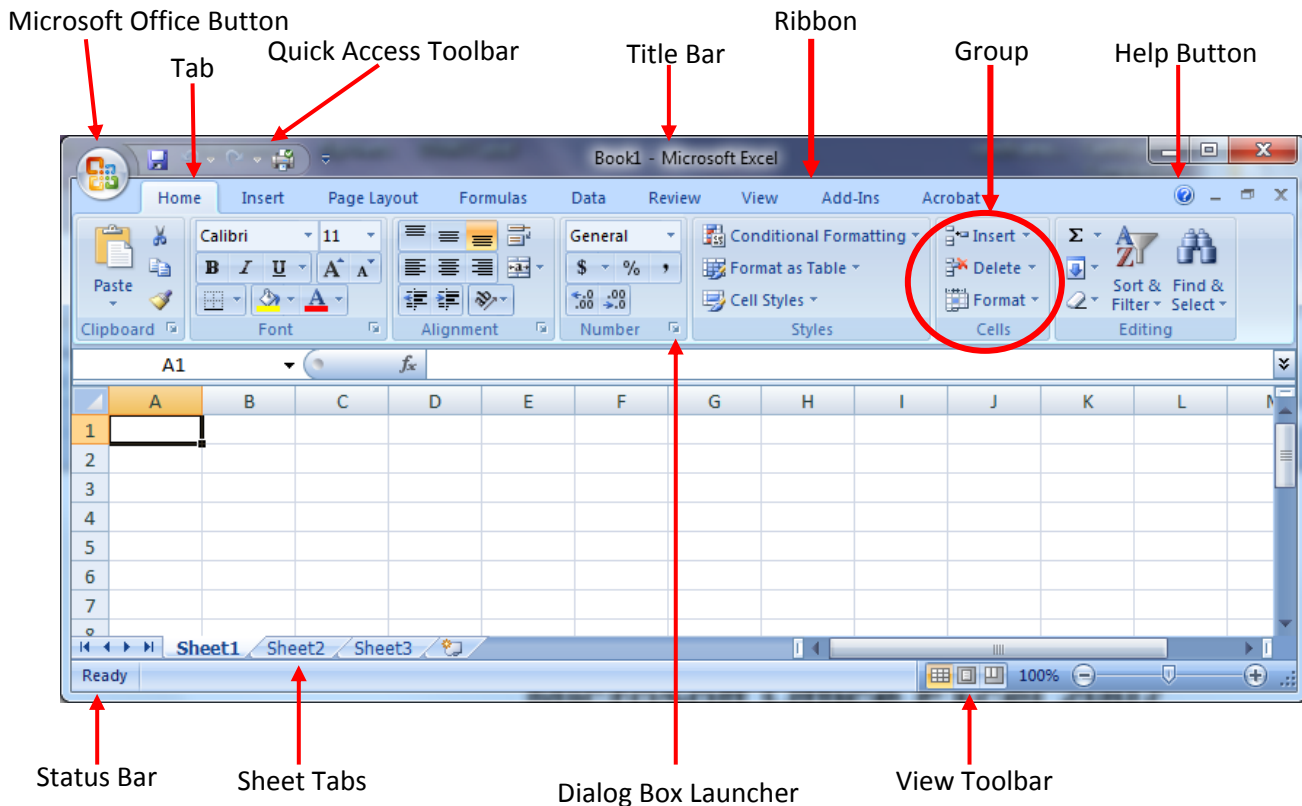


Microsoft Office Excel 2007

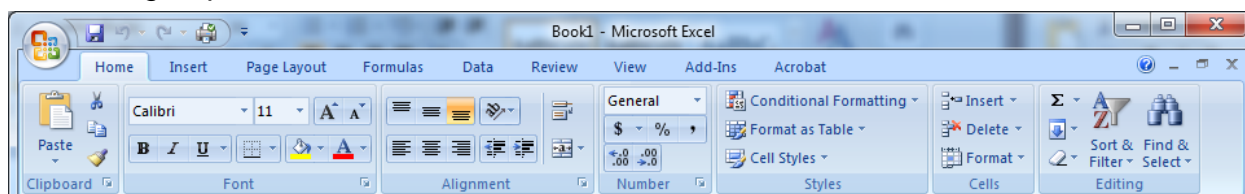
The Microsoft Office Excel environment is designed to more closely reflect the way people generally work with the program. Let's tour the new look.



- **Microsoft Office Button:** contains common files and system commands.
- **Tab:** contains tools and commands; the Home tab is active by default; clicking on one of the other tabs displays that tab's buttons.
- **Quick Access Toolbar:** holds commands that you use often; Save, Undo, and Repeat buttons are active by default; you can customize the toolbar to hold any command you use frequently.
- **Title Bar:** displays the name of the active document.
- **Ribbon:** below the Title Bar; makes all the capabilities of Excel available in a single area.
- **Group:** holds organized buttons according to tabs.
- **Help Button:** right-hand end of the ribbon; click on it to search for Excel help.
- **Status Bar:** contains worksheet information and shortcuts; right click to turn on or off items that are displayed.
- **Sheet Tabs:** by default, there are three sheet tabs when you open a new workbook.
- **Dialog Box Launcher:** holds related but less common commands; display by clicking at the right end of the group's title bar.
- **View Toolbar:** provides tools for adjusting the view of a document.

As with all Office 2007 applications, the band at the top of the Excel 2007 window is the **Ribbon**. The Ribbon is made up of different **tabs**. Each tab is related to specific kinds of work that people do in Excel. You click the tabs at the top of the Ribbon to see the different commands on each tab. The **Home** tab, the first tab on the left, contains the everyday commands that people use the most.

Commands are organized in small related **groups**. For example, commands to edit cells are grouped together in the **Editing** group, and commands to work with cells are in the **Cells** group.



Here are some ways to make the Ribbon work better for you:

- Click the **Launcher** in the bottom right corner of a group to launch the dialog box or task pane for those group tasks.
- To display only the tabs in the Ribbon, right-click in the Ribbon and select **Minimize the Ribbon** from the resulting menu.
- To swap placement of the Quick Access toolbar and the Ribbon, right-click in the Ribbon and select **Show Quick Access Toolbar Below the Ribbon** from the resulting menu.

It is now time to get familiar with the new look of Excel 2007.

Start a new Excel workbook by clicking on the Start button at the bottom left-hand corner of your desktop and open Excel.



Creating Workbooks

1. Click the Microsoft Office Button, and then click **New**.
2. Double-click **Blank document**.



Columns, rows, and cells are what you see when you open Excel. When you start Excel you're faced with a big empty grid. There are letters across the top and numbers down the left side. And there are tabs at the bottom named Sheet1, Sheet2, and so on.

Or Start a Workbook from a Template

1. Click the Microsoft Office Button, and then click **New**.
2. Under Templates, do one of the following:
 - a. Click **Installed Templates** to select a template that is available on your computer.
 - b. Click one of the links under **Microsoft Office Online**, such as **Calendars**, **Forms**, or **Schedules**.
3. Double-click the template that you want.

Saving a Workbook



To keep your work, you have to save it, and it's never too early to do that.

1. To save a workbook for the first time, either click the **Save** icon  on the **Quick Access Toolbar** or click the **Microsoft Office Button**  and then click **Save**, or press **CTRL + S**.
2. In the Save As dialog box, choose a location to save the document.
 - In Windows Vista and Windows 7, select a location to save the document in the **Address Bar** at the top of the dialog box. It defaults to Documents or the last place you saved a Word document.
 - In Windows XP, select a location to save the document in the **Save In** list at the top of the dialog box.
3. Enter a name for the workbook in the **File name** box.
4. The **Save as type** box should say Excel workbook (*.xlsx file extension).
5. Click **Save**.

Note: You can save your workbook in a lower version by choosing to save as an Excel 97-2003 Workbook (*.xls file extension).



Closing a Workbook

When you are through with a workbook and have saved your work, close the file.

- Click the **Microsoft Office Button** , and then click **Close**.
- Click the **Microsoft Office Button** , and then click **Exit Excel** in the lower right-hand corner.
- Click the little black X which is under the red X at the top right-hand corner of the program. The red X will close the entire program.

Opening a Workbook

If you already have an Excel spreadsheet that you want to open, there are several ways to open it.

- To see a list of the workbooks opened most recently, click the **Microsoft Office Button** . Click any workbook in the **Recent Documents** list to open it. If you use a workbook frequently, there is even a way to pin it to the Recent Documents list.
- Click the **Microsoft Office Button** , and then click **Open**. The Open dialog box will appear. The first time the Open dialog box is used, it will default to the Documents folder. If you use it again in the same Excel session, it will open in the last location used.
- **CTRL + O** will also open the Open dialog box so you can browse to the workbook that you want to open.

Quick Tip: Workbooks created with previous versions of Excel can be opened with Excel 2007. The name of the document appears in the title bar with **Compatibility Mode** to its right. Compatibility Mode ensures that no new or enhanced features in

Office 2007 are available while you are working with a workbook, so that people who are using previous versions will have full editing capabilities.

Extension for Excel 97-2003: .xls

Extension for Excel 2007: .xlsx

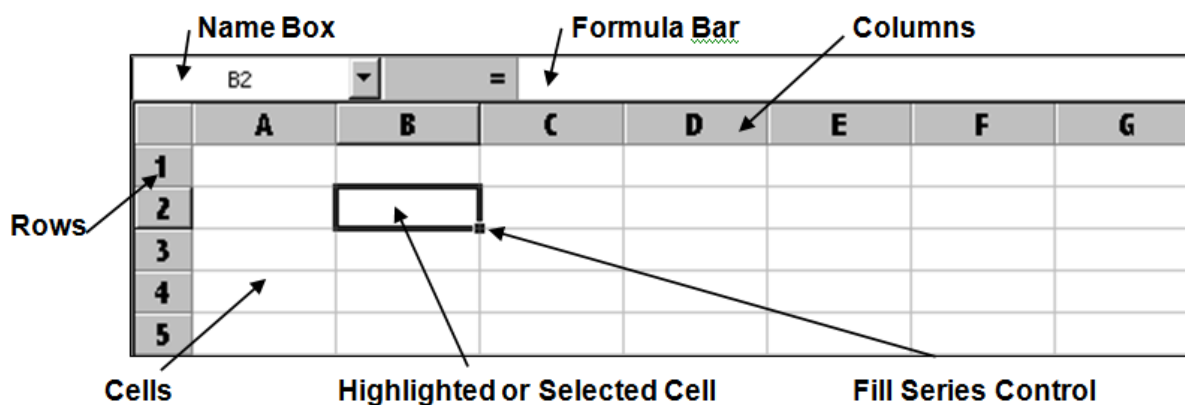
Layout of Screen

When you start Excel, you open a file that's called a **workbook**. Each new workbook comes with three **worksheets**, like pages in a document. You enter data into the worksheets (AKA spreadsheets.) Each worksheet has a name on its **sheet tab** at the bottom left of the workbook window: Sheet1, Sheet2, and Sheet3. You click each sheet tab to view a worksheet. It's a good idea to rename the sheet tabs to make the information on each sheet easier to identify. For example, you might have sheet tabs called January, February, and March for budgets or student grades for those months. You can add additional worksheets if you need more than three. Or if you don't need as many as three, you can delete one or two (but you don't have to).

After the first 26 column headings (A through Z), the next 26 column headings are AA through AZ. The column headings continue through column XFD, for a total of 16,384 columns.

- Column headings are indicated by letters.
- Row headings are indicated by numbers.

Worksheets are divided into columns, rows, and cells. That's the grid you see when you open up a workbook.



The alphabetical headings on the columns and the numerical headings on the rows tell you where you are in a worksheet when you click a cell. The headings combine to form the cell address, also called the cell reference.

When you open a new workbook, the first cell is the active cell. It has a black outline. In the picture above, cell B2 is selected and is the active cell. It is outlined in black.

1. Column B is highlighted.
2. Row 2 is highlighted.
3. Cell B2, the active cell, is shown in the Name Box in the upper-left corner of the worksheet.

Activity 1: Working with Worksheets

Exercise 1: Rename a Worksheet Tab

In a new workbook, the worksheet tabs at the bottom of the workbook are called Sheet1, Sheet2, and Sheet3. In this exercise you'll give a new name to one of the worksheet tabs.

1. Right-click the **Sheet1** tab at the bottom of the window, and then click **Rename**. The Sheet1 name is selected.
2. Type the new name: **Practice**, and then press ENTER.

Tip: You can also rename the selected worksheet tab by clicking the **Home** tab at the top of the Ribbon (the first tab on the left). In the **Cells** group (the group name is at the bottom of the Ribbon), click the arrow on **Format**, and click **Rename Sheet**. Then, on the worksheet tab at the bottom, type the new name.

Exercise 2: Move from One Worksheet to Another

In this exercise you'll learn different ways to move from one worksheet to another. Why would you need to use more than one sheet, and need to move from one sheet to another? Basically, to keep things apart so they are easier to see. You might have budgets for different months on different sheets, or grades for different classes, or fundraisers. It can be easier to move between sheets than to scroll up and down a lot.

1. Click the **Sheet2** tab. That moves you from the Practice worksheet to the Sheet2 worksheet. In a blank worksheet, it's hard to tell that you've really changed sheets, since everything looks the same.
2. Now use a keyboard shortcut to move to the **Sheet3** tab. Press CTRL+PAGE DOWN.
3. Try the keyboard shortcut to move to the previous worksheet. Press CTRL+PAGE UP.

Exercise 3: Add Color to Worksheet Tabs

You can add color to worksheet tabs to make them easier to tell apart.

1. Right-click the **Practice** tab, point to **Tab Color**, and select the color you want. Now the tab has a band of the color you chose.
2. Click the **Sheet2** tab. Notice that now the **Practice** tab is fully colored. A color band means that the worksheet is on top, and full color means that it is not the one on top.

Tip: You can also start to add color to the worksheet tab by clicking the **Home** tab at the top of the Ribbon (the first tab on the left). In the **Cells** group, click the arrow on **Format**, and then click **Tab Color**.

Exercise 4: Add and Delete Worksheets

1. Add a Worksheet

On the Ribbon on the **Home** tab, in the **Cells** group, click the arrow on **Insert**, and then click **Insert Sheet**. A new worksheet is inserted. You see the Practice tab and three other tabs. A new sheet is usually inserted in front of the selected sheet.

Tip: You can also insert a worksheet by clicking the **Insert Worksheet** button (to the right of the worksheet tabs). 

2. Delete a Worksheet

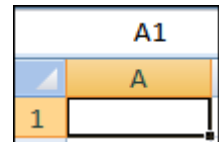
Click the **Sheet3** tab at the bottom of the worksheet. In the **Cells** group, click the arrow on **Delete**, and then click **Delete Sheet**. Or right-click the **Sheet3** tab, and then click **Delete**.

Note: If the worksheet you are deleting contains data, you'll see a message that data may exist on the worksheet. If you're sure, then click **Delete**. The Sheet3 worksheet is deleted.

Exercise 5: Review Column Headings and Use the Name Box

In this exercise you'll take a look at column headings and see how to use the Name Box to navigate in the worksheet.

1. Click the **Practice** tab.
2. Place the insertion point in the **Name Box** in the upper-left corner of the window. It's right above cell A1. It says "A1" in the box.
3. Type **AA1** in the **Name Box**, and then press **ENTER**. Now cell AA1 is the active cell. It's outlined in black, and the column heading for column AA is highlighted. The heading for row 1 is highlighted as well, since the active cell is in the first row.
4. Now let's try another way to activate a specific cell. Press F5 to open the **Go To** dialog box.
5. In the **Reference** box at the bottom of the dialog box, type **XFD1048576**, and then press **ENTER**. You've reached the very last cell in the worksheet, cell 1,048,576 in column XFD.
6. To go back to cell A1, press **CTRL+HOME**.



Activity 2: Entering Data

You can enter two basic kinds of data into worksheet cells: numbers and text. You can use Excel to create budgets, to work with taxes, or to record student grades. You can use Excel to list the products you sell or to record student attendance. You can even use Excel to track how much you exercise every day, and your weight loss, or how much your house remodel is costing you. The possibilities really are endless.

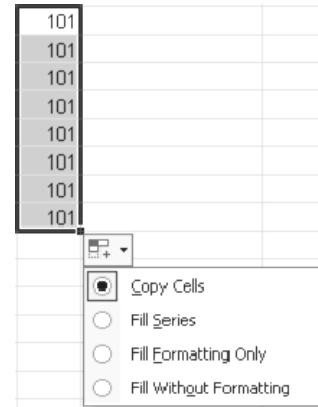
Exercise 1: Using Excel as a Database

Excel can be utilized as a quick and easy to use database. The key is to label the first row with the headings of your data. Then enter the data below the column headings. Be sure that you do not mix data types in your data columns. Make sure that there are not any blank rows in your data. Otherwise, Excel interprets it as the end of your data.

1. Create the following column headings in rows 1 and enter 101 in cell A2:

	A	B	C	D	E	F	G
1	P.O.	VENDOR	DEPARTMENT	BUDGET CODE	PRICE	QTY.	EXT. PRICE
2	101	Dell	Tech	Supplies	90	5	

- Now use the **Fill Series** option by doing the following:
Click on cell **A2**. Now carefully move your pointer over the small square in the lower right-hand corner of the selected cell. The pointer will turn into a small cross. Hold down the left mouse button and drag it down the column from cell **A2 to cell A11**, then release the mouse button. Excel will copy the number in cell A2 down the column. Out to the right of the cell you will see the **AutoFill Options** button and to the right of it, there is a drop-down menu arrow, from the drop-down menu choose **FILL SERIES**. Excel now changes the number 101 to the numbers in a series.



- Enter the rest of the data in the worksheet. When entering data press **TAB** to move the selection one cell to the right. Press **ENTER** to move the selection down one cell.

Note: Excel has a feature called **AutoComplete**. Once you type a word, Excel will complete it for you the next time you start typing that word. You do not have to key the whole word.

For example: Once the word “Tech” has been typed, the next time the letter “T” is typed, the word “Tech” will come up. To accept the word, press the **TAB** key or the **ENTER** key to move on to the next cell. If that is not the word you want in that cell, just keep typing the word you intended for that cell.

	A	B	C	D	E	F	G
1	P.O.	VENDOR	DEPARTMENT	BUDGET CODE	PRICE	QTY.	EXT. PRICE
2	101	Dell	Tech	Supplies	90	5	
3	102	SAS Consulting	Tech	Equipment	1170	2	
4	103	Copy Master	Admin	Equipment	399	4	
5	104	Office Max	Repair	Supplies	768	1	
6	105	CDW	Admin	Services	50	9	
7	106	Office Depot	Tech	Services	980	3	
8	107	Apple	Admin	Supplies	50	4	
9	108	Dell	Tech	Equipment	250	4	
10	109	SAS Consulting	Repair	Equipment	554	3	
11	110	Office Depot	Admin	Supplies	259	1	

Activity 3: Creating a Basic Spreadsheet

After entering all of the information, you may notice that you can't see all of the information you typed in each cell. You will see that the text in cells C1 & D1 seems to flow into the cells next to them (although it really doesn't). You can fix this by resizing columns C & D.

- To resize column C, move the mouse pointer to the column ID area and point to the line between columns C & D. The pointer will turn into a double-arrow. Hold down the left mouse button and drag the column width until the words fit in column C.

2. To resize column D, move the mouse pointer to point to the line between columns D & E. When the pointer turns into a double-arrow, double-click the left mouse button.

Note: You can also resize rows using this same method. Point to the row ID area and when the pointer turns into a double-arrow, double click the left mouse button.

Note: When numbers or dates are too wide to fit into a cell, you'll see this: #####. Double-click the right column boundary next to the column heading, and the column will widen.

3. In cell G2 under **EXT. PRICE**, you will type a formula. A formula is simply an instruction to Excel that it should perform some operation, such as multiplying or adding. A formula will always start with the equal (=) character. Enter the following text in cell G2 and press the **ENTER** key on the keyboard:

=90*5

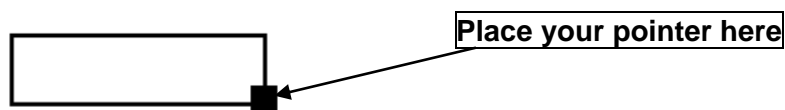
4. Now change the price from **90** to **95**. Notice the value in cell G2 for **EXT. PRICE** didn't change. Wouldn't it be better if we could substitute cell addresses for the actual values so that if we changed the value in one cell, it would be reflected elsewhere. This is the true power of the spreadsheet. We will do this in the next step.
5. Let's change the formula in cell G2 into cell addresses instead of the actual values. This way when the price or quantity is changed, the extended price will automatically update. Go back to cell **G2** and enter this formula:

=(click on cell E2)*(click on cell F2) press **ENTER**

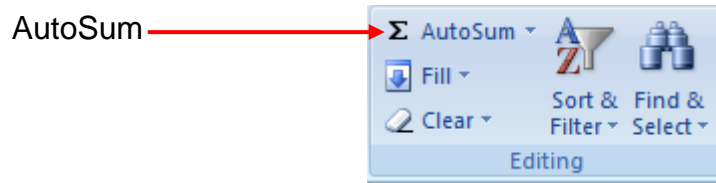
Note: Symbols to use for functions

* (asterisk)	to multiply
/ (slash)	to divide
- (hyphen)	to subtract
+ (plus sign)	to add

6. Try changing quantity and price to see if extended price updates (You must press **ENTER** when you change any numbers.)
7. To copy the formula down the column, click on the **EXT. PRICE** formula in cell G2. Now carefully move your pointer over the small square in the lower right-hand corner of the selected cell (see picture below.) The pointer will turn into a small cross. Hold down the mouse button and drag it down the column from cell G2 to cell G11, then release the mouse button. Excel will copy the formula from cell G2 and adapt it to the new rows.



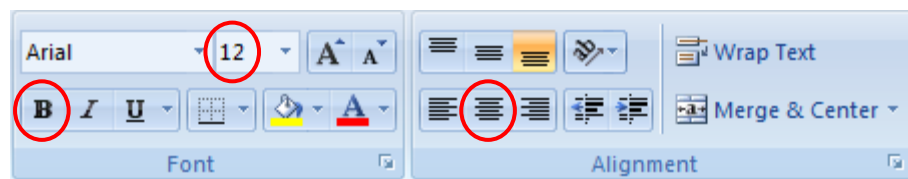
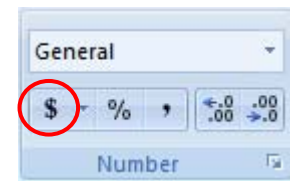
8. Skip one row below the last item and enter **TOTAL** in cell A13.
9. Move across from **TOTAL** to the **EXT. PRICE** column and click on the cell G13. We will use a feature of Excel to add up the prices and give a total. Click the **AutoSum** button (icon shown below) under the **Editing Group** on the Home tab of the Ribbon and then press **ENTER**.



Note: If there are any blank rows, Excel interprets this as the end of your data and will only select the last numbers in the column. To have the whole column selected click on cell **G2** and **drag down to G11** and Excel will then add the whole column.

Activity 4: Formatting your Spreadsheet

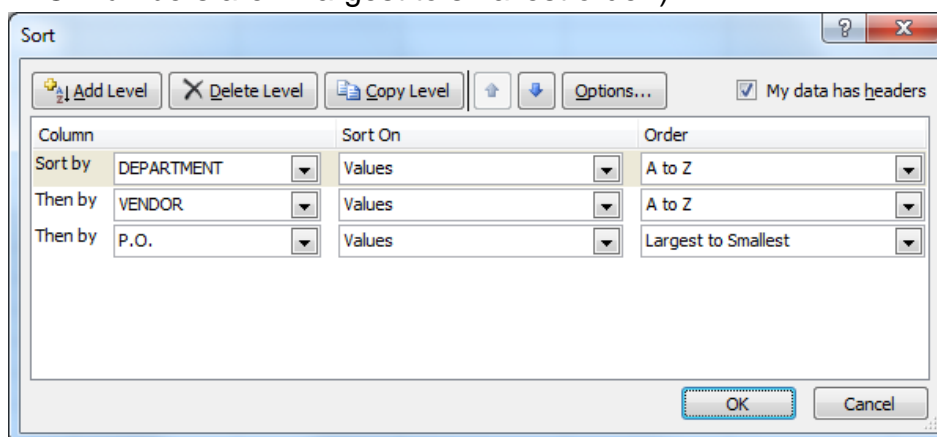
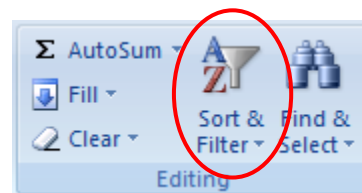
1. The **Price** column and the **Ext. Price** columns need the numbers to be changed to currency. To format them at the same time, highlight the cells in the column under Price, then press and hold the **CTRL** key on the keyboard and click in cell G2 and click and hold down the left mouse button and drag down to cell G13 and then release the mouse button and the CTRL key.
2. On the Home tab, go to the number group and click on \$ (the dollar sign). You can also right-click and select **Format Cells**, then under the **Number** tab, choose **Currency** from the list on the left. Click the **OK** button.
3. Highlight the cells containing the column headings (cells A1:G1) and go to the Font group on the Home tab and change the font to size **12** point and make the font style **Bold**. Then center the headings by clicking **CENTER** alignment icon in the Alignment group.



4. Preview your worksheet to get a printable view. Click the Microsoft Office Button and then select **Print**, and then click **Print Preview**. You can also press CTRL+F2. Click **Close Print Preview** when done.
5. While you are in Print Preview, you can set guidelines, move your margins, create a header/footer, and many more things. To have gridlines print, select **Page Setup** and choose the **SHEET** tab and make sure the **GRIDLINE** box is checked.

Activity 5: Sorting your Data

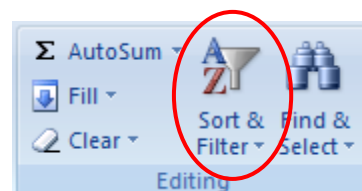
1. To sort the worksheet, click on any cell in your data. You must be in the data, or you will get an error message.
2. On the Home tab under the Editing group, select **Sort & Filter**. You can sort A to Z, Z to A, or do a Custom Sort.
3. Under the “Sort by” drop-down arrow, select **DEPARTMENT** and make sure it is in **A to Z** (ascending) order.
4. Click on **Add Level**. Under the “Then by” drop- down arrow, select **VENDOR** and make sure it is in **A to Z** order.
5. Click on **Add Level**. Under the second “Then by” drop-down arrow, select **P.O.** but make sure it is in **largest to smallest** (descending) order.
6. Then click **OK**. (Notice that Dell is listed twice under the TECH department and that the P.O. numbers are in largest to smallest order.)



Activity 6: Filtering your Data

AutoFilter is a powerful function that allows you to extract just the data you wish to see. This is especially helpful when you have lots of data but only wish to see a small part of it. You can use AutoFilter on as many data columns as you wish to zero in on the data you want to view.

1. To sort the worksheet, click on any cell in your data. You must be in the data, or you will get an error message.
2. On the Home tab under the Editing group, select **Sort & Filter/Filter**. You will notice drop-down arrows on each of your headings.
3. Click on the **Price** column heading to see a list of different data values in that column and select one.
4. After selecting an item, only the rows containing that data are shown. Note that the drop-down arrow will change to a filter symbol to indicate that the column has been filtered.
5. You can continue to select other column headings to further filter the data or to go back to view all the data, select **ALL** from the AutoFilter list.



Activity 7: Creating Averages for Sales

1. Click on **FILE / NEW** and click the Workbook icon and click on **OK**.
2. Create the following labels across the top of the spreadsheet:

	A	B	C	D	E	F	G
1	Name	Day 1	Day 2	Day 3	Day 4	Day 5	Sales Average

3. Enter in the name and sales per day for Bob Jones.

	A	B	C	D	E	F	G
2	Bob Jones	27.5	80	60.75	78	97.25	

4. Go to the "Sales Average" column and click on cell G2 (Bob Jones' Sales Average).
5. Go to the menu bar and select **INSERT / FUNCTION**. From the list on the right, click on the **AVERAGE** function.
6. Click **OK**.
7. A confirm box will appear. Click **OK**. Bob's sales will then be averaged.
8. Enter the rest of the employees and their sales figures:

	A	B	C	D	E	F	G
3	Sue Smith	33.75	53	84.25	42	100	
4	Jan Parks	51	42.5	72.75	54	62	
5	John Clark	10	0	30	42.5	0	

9. Click in cell G2 (Bob Jones' sales average). Move the pointer to the bottom right corner of the cell, when you see the small square handle, click and hold the left mouse button and drag it down thru cell G5. Release the mouse button and the "Sales Average" formula will copy down to the other employee's cells. Excel adjusts the formula to match each new row.
10. Columns B thru G need the number style to be changed to currency.
 - a) To format the whole column, click on the column heading for Column B so that the whole column is highlighted, hold down the left mouse button and drag the pointer across to Column G (columns B-G should be highlighted).
 - b) Go to the menu bar, click on **FORMAT / CELLS**.
 - c) Click on the **NUMBER** tab.
 - d) Choose **CURRENCY** from the list. All the highlighted columns will change to the currency number styling.
11. If you need to, go ahead and resize the columns to fit the information.

Special note: Formatting the whole column will prevent us from having to format any new entries that may be made for additional employees and their sales figures. The column will already be formatted for "currency" styled numbers.

Activity 8: Making a Chart

1. Highlight the cells in the “Sales Average” column (cells G2 thru G5). Then while holding down the **CTRL** key on the keyboard, highlight the cells under the “Name” column (cells A2 thru A5). You should see items in two separate columns highlighted if you were successful.
2. Click on the **INSERT** tab. In the Charts group, select **PIE**. You may select a 2D or a 3D pie.
3. In the Chart Tools under Chart Layouts, you may select the overall layout of the chart. For the title, put **SALES AVERAGES** in the box.
4. Try moving the graph around on the sheet to place it and resize it using the handles.
5. Try changing some prices and quantities in the cells and see how the graph will instantly update.

Other Quick Tips:

To enter a date in column B, the Date column, you should use a slash or a hyphen to separate the parts: 7/16/2009 or 16-July-2009. Excel will recognize this as a date. If you need to enter a time, type the numbers, a space, and then "a" or "p" — for example, 9:00 p. If you put in just the number, Excel recognizes a time and enters it as AM.

Tip To enter today's date, press CTRL and the semicolon (;) together. To enter the current time, press CTRL and SHIFT and the semicolon all at once. Excel aligns numbers on the right side of cells.

Other numbers and how to enter them

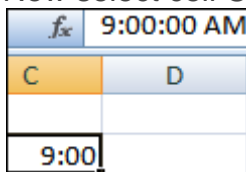
- To enter fractions, leave a space between the whole number and the fraction. For example, 1 1/8.
- To enter a fraction only, enter a zero first. For example, 0 1/4. If you enter 1/4 without the zero, Excel will interpret the number as a date, January 4.
- If you type (100) to indicate a negative number by parentheses, Excel will display the number as -100.

ENTER DATES AND TIMES

In this exercise you'll enter some dates and times and then look at how they are formatted. You'll also take a look at the formula bar.

1. Click cell B2. Enter **7/16/2009**, just like that, and then press ENTER or TAB.
2. Now you'll type a time. You learned in the lesson that Excel interprets any time as AM unless you type a "p" after it. To see that, click cell C2, type **9:00**, and press ENTER.

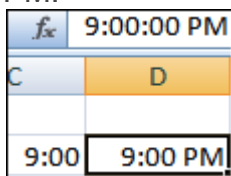
Now select cell C2 again. Look in the **formula bar** above cell C1.



The formula bar displays the content of the active cell. In the formula bar you can see how Excel interprets the time you entered: as 9:00 AM.

3. Select cell D2, type **9:00 p** (be sure to leave a space between 9:00 and the p), and press ENTER. It says 9:00 PM.

Now select cell D2 again. Look in the formula bar. The time shows there as 9:00 PM.

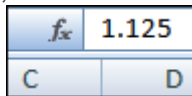


ENTER NUMBERS

In this exercise you'll enter different types of numbers.

1. Select cell B4. Type **(100)**, and then press ENTER. Notice that the number is displayed as -100.

2. In cell B5, enter a whole number and a fraction: **1 1/8**. Be sure to leave a space after the first 1. Press ENTER after you've entered the entire fraction. Then select cell B5, and look at the value in the formula bar. It is displayed as 1.125. Why is that?



When you enter a fraction, Excel actually stores it as a decimal number. Because you typed 1 1/8, Excel keeps that fraction in the worksheet cell. But the formula bar shows how Excel sees the number. You can see how Excel interprets the data you enter by selecting a cell and then looking in the formula bar.

3. Now enter another fraction that you might expect to work the same way: In cell B6 enter a fraction only: type **1/4**. Now press ENTER. What happened? Excel interprets the number as a date. Why? You need to enter a zero before a fraction with no whole number.
4. In cell B7, again enter a fraction only, but this time enter a zero first: **0 1/4**. Press ENTER. Then select cell B7 again. Notice that the value is displayed as 0.25 in the formula bar. When you type a fraction with no whole number, remember to enter a zero (and a space) before you type the fraction.